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PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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| Applicant | : | Sean Hu, et al. |
| Application No. | : | 09/684,152 |
| Filed | : | October 6, 2000 |
| Title | : | Apparatus, Systems and Methods For Printing Dimensionally Accurate Symbologies on Laser Printers Configured With Remote Client Computer Devices |
| Grp./Div. | : | 3629 |
| Examiner | : | Webb, Jamisue A. |
| Docket No. | : | PSTM0034/MRK |

Mail Stop Amendment
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**DECLARATION UNDER 37 C.F.R. SECTION 132**
**BY WILLIAM W. SMITH III**

**BACKGROUND INFORMATION ABOUT THE DECLARANT**

1. I, WILLIAM W. SMITH III, am Chief Technology Officer ("CTO") of iShip Inc., a wholly owned subsidiary of United Parcel Service, which is one of the assignees of the above-mentioned application. I have been in the employ of iShip Inc., or one of its predecessor's in interest, since at least 1995, and in the present capacity as Chief Technology Officer since at least 1997.

2. iShip Inc. is an online provider of a multi-service, multi-carrier, Internet-enabled server-based shipping system (at, among others, www.iship.com) for use by small volume shippers such as small businesses and home offices. The multi-carrier, multi-service, Internet-based shipping system that iShip Inc. offers

provides shipping users ("shippers") with a cross-comparison of shipment rating, service options, delivery schedules and other services by each of the multiple carriers for each of multiple services so that a shipper can compare multiple services offered by the multiple carriers and select one service offered by one of the multiple carriers to ship a parcel. When I first became involved in the development of this particular shipping system, I worked for MoveIt! Software Inc. ("MoveIt!"), a company that was founded in 1997; I was one of three founders. MoveIt! eventually became iShip.com, Inc., which eventually merged with Stamps.com Inc. and which is currently a wholly owned subsidiary of United Parcel Service ("UPS"). As of the date of this Declaration, iShip Inc. and Stamps.com are joint owners in common of the subject invention.

3. I hold a Master of Science degree, granted in 1988, in Industrial Engineering and Operations Research from Virginia Tech.

4. I am familiar with, and one of the inventors named on, the above-identified patent application.

5. I am familiar with the Office Action regarding the above-identified patent application dated August 1, 2005.

6. I am familiar with the references Kara (U.S. Patent No. 6,233,568; "*Kara*"), Nicholls et al. (U.S. Patent No. 5,631,827 "*Nicholls*") and Martin et al. (U.S. Patent No. 6,078,936; "*Martin*") that were cited by the August 1, 2005 Office Action.

## BACKGROUND INFORMATION REGARDING THE INVENTION

7. At MoveIt!, we intially defined our primary market as small enterprises and individuals who were small-volume shippers.

8. By the late 1990's, members of our primary market were predominately accessing the Internet via browser software. Then, and today, browser software is installed on a computer device and executes as a type of virtual machine; browser software executing on a computer device executes within the operating system that controls the computer device.

9. By the late 1990's, various small enterprises and individuals, the very members of our primary market, had begun to install firewalls to protect their computer systems from unauthorized access. The firewalls prevalent during the late 1990's prevented, to some extent, computers within the firewall from downloading software from various external sources (sources outside the firewall), including, e.g., Internet sources.

10. At MoveIt!, because so many of our potential customers were installing, or had installed, firewalls, we wanted to provide an Internet-based system that would be compatible with, and not be compromised by, firewall protection measures. Because firewalls installed by many of our potential customers would prevent the downloading and installation of software on their client computers, our initial approach in developing an Internet-enabled, server based shipping system was to provide a completely browser-accessed system that would not require a client user to download or install any client software on the client user's client computer.

11. Client software is software that is installed on a client computer; client software, once installed, executes on the client computer and "talks" to corresponding server software that is executing on a server computer when the client computer accesses the server computer. Client software, because it is installed on a client computer, has the ability to access information about the client computer, and can then, if asked by the corresponding server software, provide the information about the client computer to the server software.

12. During the late 1990's, browser software was very limited as to providing information about the client computers on which the browser software executed. Specifically, during the late 1990's, browser software that predominated the industry did not provide, among other things, information about image resolution characteristics of peripheral devices, such as, e.g., display and printer devices, that were configured with the client computer on which the browser software executed. That is, with respect to the browser software that predominated the industry during the 1990's, it was not possible for an Internet-enabled, server-based system that was accessed by browser software to query the browser software and directly access via the browser software, information about image resolution characteristics of peripheral devices, such as, e.g., display and printer devices, that were configured with the client computer on which the browser software executed.

13. During the late 1990's, a system such as ours that was accessed by browser software, and that did not have corresponding client software executing on the client computer on which the browser software was executing did not have direct access to information about image resolution characteristics of peripheral devices, such as, e.g., display and printer devices, that were configured with the client computer on which the browser software was executing.

14. As part of our system requirements, we wanted to provide client users the ability to print shipping labels at printers configured with the client user's client computer.

15. Shipping labels comprise human-readable text and machine-readable symbologies, such as two-dimensional and other barcodes.

16. In the interest of consistent machine-readable accuracy of machine-readable symbologies, some carriers sometimes require stringent compliance with certain stringent dimensional standards for printed machine-readable

symbologies that must comprise shipping labels for parcels shipped via the respective carrier's services. For example, UPS required that its two-dimensional "maxicode" bar code be proportionally printed, 1-inch by 1-inch, with 203 dots per inch.

17. It is known in the art that if an image is sent via browser software to a remote client computer for printing on a printer device configured with that remote client computer, the image will not necessarily be printed in a dimensionally accurate manner if the image is sent with graphic resolution characteristics that are not consistent with the resolution characteristics of the display device which renders images sent via the browser software. It is known in the art that it is possible for a display device configured with a user's computer to be set with resolution characteristics that are not consistent with the resolution characteristics set for one or more printer devices configured with the user's computer. For example, it is possible for a computer user to set, such as via WINDOWS® set-up features, resolution characteristics for their computer's display device that are different from the resolution characteristics for their computers printer device(s).

18. It is known in the art that dimensionally inaccurate printing may sometimes be observed when a user accessing a website tries to print an image from the website, and the image when printed is, for example, very small. Therefore, as is known in the art, in order to cause the printing of an image with dimensional accuracy via a remote client computer, an application program needs to be able to provide the browser software that is accessing the application program with an image that is formatted in a manner that is consistent with the resolution characteristics of the display device which is used to render images sent via the browser software. It is known in the art that when an application program provides the browser software that is accessing the application program with an image that is formatted in a manner that is consistent with the resolution characteristics of the display device which is used to render images sent via the

browser software, the operating system of the computer on which the browser software is executing, e.g., WINDOWS®, can accurately translate the image as rendered via browser software according to the display device graphic resolution characteristics to the graphic resolution characteristics of the printer device that is chosen to print the image.

19. In order to comply with stringent dimensional standards for printing machine-readable symbologies, and because our system was to provide client users with the ability to print shipping labels with two-dimensional and other types of barcodes, our system needed to be able to determine image resolution characteristics of the display device configured with the client computer on which the browser software accessing our system was executing and for which the browser software rendered images of our application website.

20. In order to obtain information about image resolution characteristics of display devices that were configured with the client computers on which browser software that accessed our system was executing, I and another inventor invented computer software, methods and the like for determining such image resolution characteristics; an embodiment of our invention comprised sending a line of text to a client computer via browser software executing on the client computer for display on a peripheral display device configured with the client computer; the embodiment of our invention requested that the user of the client computer answer a question about the displayed text -- paraphrasing: do you see one line of text, or two lines of text? The embodiment of our invention received the user's answer. Depending on the user's answer, the embodiment of our invention then deduced the image resolution characteristics of the respective peripheral display device that was configured with the client computer on which the browser software that was accessing our system was executing, so that two-dimensional and other barcodes could be printed via a printer device configured with the client computer in a dimensionally accurate manner. For example, with respect to a UPS "maxicode" two-dimensional bar code, a shipping label

generated by our system would result in the proportionally accurate printing of a 1-inch by 1-inch two-dimensional bar code with 203 dots per inch.

## DISCUSSION OF THE *KARA* REFERENCE

21. *Kara* discloses that:

> WINDOWS printer drivers, supplied with the WINDOWS system and apart from the system, can change for any given printer installed, isolating an application program from the innate differences of these printers in a fashion known as "device independence" also well known in the art. The driver, in steps 655 and 656, does its work of printing on the envelope, 654, which has already been inserted in the printer...

(*Kara*, col. 26, lines 60-67). It is my opinion that the above-quoted language of *Kara* means that:

> WINDOWS printer drivers, supplied with the WINDOWS system and apart from the [*Kara*] system, can change for any given printer installed, isolating an application program [such as the *Kara* system] from the innate differences of these printers in a fashion known as "device independence" also well known in the art. The driver, in steps 655 and 656 [elements depicted in *Kara's* Figure 6], does its work of printing on the envelope, 654, which has already been inserted in the printer.

22. It is my opinion that it is known in the art that a WINDOWS® printer driver, such as the WINDOWS® printer driver referenced in *Kara*, when installed on a particular computer device, has direct access to information about that particular computer device, including information about peripheral devices, such as printer and display devices, that are configured with that computer device. By "direct access", with respect to a WINDOWS® printer driver, such as the WINDOWS®

printer driver referenced in *Kara*, I mean, the WINDOWS® printer driver, such as the WINDOWS® printer driver referenced in *Kara*, has the ability to query what is referred to in the art as a "device context" that can provide information about a particular peripheral device.

23. It is my opinion that it is known in the art that a WINDOWS® printer driver, such as the WINDOWS® printer driver referenced in *Kara*, can determine display and/or print characteristics regarding peripheral devices, including printer and display devices, that are configured with that computer device by virtue of direct access by the WINDOWS® printer driver to information about such peripheral devices.

24. It is further my opinion that it is known in the art that an Internet-enabled, server-based application computer system that is accessed by browser software installed on a particular computer device must obtain information, such as image resolution characteristics, about peripheral hardware configured with the client computer that is being used to access the Internet-enabled, server-based application computer system, in order for dimensionally accurate printing of dimensionally-sensitive symbologies; that such information, if not directly accessible by the Internet-enabled, server-based application computer system that is accessed by browser software, must be obtained in another way.

## DISTINCTIONS BETWEEN SELECTED CLAIMS AND THE CITED REFERENCES

25. It is my opinion that, as compared to various Claims, e.g., Claim 7, (*see also* Claim 17 (method), and Claim 32 (computer program product)) of the above-referenced application, that are directed to determining graphic resolution characteristics about a display device configured with a computer device on which browser software accessing the computer system is executing according

to an input by a user of the computer device as to a test image pattern as displayed on the display device, the above-cited quotation from *Kara* indicates that the *Kara* system would not determine graphic resolution characteristics about a printer installed with a computer accessing the *Kara* system. Rather, it is my opinion that the above-cited quotation from *Kara* indicates that the *Kara* system would rely on the WINDOWS® printer driver referenced in *Kara* that is referenced as executing on the computer accessing the *Kara* system to print printable matter on a peripheral printing device. It is further my opinion that the WINDOWS® printer driver referenced in *Kara*, executing on a computer accessing the *Kara* system, would rely on "direct access" (such as by querying what is referred to in the art as a "device context") for information about a particular peripheral device.

26. It is my opinion that an Internet-enabled server-based system as claimed in various Claims of the above-identified application, e.g., Claim 7 (*see also* Claim 17 (method), and Claim 32 (computer program product)) of the above-referenced application, that is accessed via browser software executing on a client computer and that determines graphic resolution characteristics about a display device configured with the client computer on which the browser software is executing according to an input by the user of the client computer concerning a test image pattern, is technologically different from a system such as is disclosed in *Kara*. That is because, as compared to determining graphic resolution characteristics about a display device configured with the client computer on which the browser software is executing according to an input by the user of the client computer concerning a test image pattern, *Kara* specifically discloses that the *Kara* system, in order to be device independent, is isolated from, and relies on the WINDOWS® printer driver referenced in *Kara*. It is my opinion that the WINDOWS® printer driver referenced in *Kara* has direct access to information about that computer and about peripheral devices configured with that computer. Further, it is my opinion that there is no disclosure in *Kara* that the WINDOWS® printer driver referenced in *Kara* would determine graphic resolution

characteristics about a display device configured with a computer device used to access the *Kara* system *according to an input by a user of the computer device as to a test image pattern as displayed on the display device* as claimed in one way or another in various Claims, e.g., Claims 7, 17, and 32 of the above-referenced application.

27. As compared to an Internet-enabled, server-based computer system such as in various Claims, e.g., Claim 7 (*see also* Claim 17 (method), and Claim 32 (computer program product)), of the above-identified application that recite in one way or another, that each user accesses the computer system using browser software installed on the user's respective remote client computer and that recite, in one way or another, determin[ing] graphic resolution characteristics about a display device configured with the remote client computer on which the browser software that is accessing the computer system is executing, according to an input by the user of the client computer concerning a test image pattern, it is my opinion that *Martin* discloses a computer system that has, and relies on, *direct communication for output* with peripheral display and printing devices. For example, FIG. 11 of *Martin*, and *Martin*, col. 14, line 34 disclose a processor 186 with image input circuitry 182 that can receive image *input* from various sources, including, among others, a network 216. Further, according to *Martin*, processor 186 can be *connected* for providing *output* images to one of several output devices (*Martin*, col. 14, lines 5-20 (emphasis added)). In view of the foregoing reasons, it is therefore my opinion that there is no disclosure in *Martin* that the system in *Martin* would determine graphic resolution characteristics about a display device configured with a computer device used to access the system disclosed in *Martin* according to an input by a user of the computer device as to a test image pattern as displayed on the display device as claimed in one way or another in various Claims, e.g., Claims 7, 17, and 32 of the above-referenced application.

28. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that the statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001, Title 18 of United States Code and that such willful false statements may jeopardize the validity of the application or any corresponding U.S. patent.

Date: DEC 29, 2005

William W. Smith III